

BERGSTRÖM et al
Serial No. Unknown

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This application is a U.S. national phase of PCT application No.

PCT/FI98/00737, filed September 18, 1998.

BACKGROUND AND SUMMARY OF THE INVENTION

Page 3, at line 25 (before the last paragraph on the page), insert the following:

-- **BRIEF DESCRIPTION OF THE DRAWINGS** --

Page 4, after line 3, insert the following:

-- **DETAILED DESCRIPTION** --

IN THE ABSTRACT

Provide what is on the attached sheet as the Abstract.

IN THE CLAIMS

Cancel claims 1 through 9 without prejudice.

Add the following new claims:

-- 10. A panel having a longer side and a shorter side, and a side aspect ratio

of at least 1.5, and comprising:

at least two reinforcing layers of substantially unidirectional substantially parallel fibers having predominant orientations that form an angle with said sides of said panel; said angle between said predominant fiber orientation and the longer side of said panel being between about 55-75°; and

approximately one-half of said reinforcing layers of said panel forming a + angle between about 55-75°, and approximately one-half of said reinforcing layers forming a - angle between about 55-75°, with respect to said longer side of said panel.

11. A panel as recited in claim 10 wherein ~~said angle is between about ±58-~~

55-75°

65°

12. A panel as recited in claim 10 wherein ~~said angle is about ±60°~~.

13. A panel as recited in claim 10 wherein ~~said at least two reinforcement~~

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layers comprise 60-100% of the thickness of said panel.

14. A panel as recited in claim 10 wherein ~~at least two of said layers, at least~~

one of which has fibers with a + orientation and at least one of which has a - orientation, are stitched together to form a multi-axial reinforcement.

15. A panel as recited in claim 14 wherein ~~about 70-100% of the thickness of~~
~~said panel is formed by multi-axial reinforcements.~~

16. A panel as recited in claim 10 wherein ~~said fibers of said at least two~~
~~layers of said panel consist essentially of E-glass fibers.~~

17. A panel as recited in claim 10 wherein ~~said fibers of said panel comprise~~
~~primarily E-glass fibers.~~

18. A panel as recited in claim 11 wherein ~~at least two of said layers, at least~~
~~one of which has fibers with a + orientation and at least one of which has a - orientation,~~
~~are stitched together to form a multi-axial reinforcement.~~

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19. A panel as recited in claim 12 wherein at least two of said layers, at least one of which has fibers with a + orientation and at least one of which has a - orientation, are stitched together to form a multi-axial reinforcement.

20. A panel as recited in claim 19 wherein about 70-100% of the thickness of said panel is formed by multi-axial reinforcements.

A 2

21. A panel as recited in claim 18 wherein about 70-100% of the thickness of said panel is formed by multi-axial reinforcements.

22. A panel as recited in claim 11 wherein said fibers of said at least two layers of said panel consist essentially of E-glass fibers.

23. A panel as recited in claim 22 wherein said at least two reinforcement layers comprise 60-100% of the thickness of said panel.

24. A boat or ship having a hull with a plurality of laterally pressure loaded structural panels as recited in claim 10.

25. A boat or ship having a hull with a plurality of laterally pressure loaded structural panels as recited in claim 18.

26. A boat or ship hull as recited in claim 24 wherein said panels have approximately 10% less weight but substantially the same ability to resist lateral pressure loads than if constructed of otherwise identical panels with an angle between said predominant fiber orientations and the longer side of said panels of 0°, 90°, or 45°.

27. A tank or pressure vessel having a plurality of laterally pressure loaded structural panels as recited in claim 10.